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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/530,447	04/28/2000	YOSHINORI KAMI	01165.0782	6878
22852	7590	06/30/2005	EXAMINER	
FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413			PATTERSON, MARC A	
			ART UNIT	PAPER NUMBER
			1772	

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/530,447

Applicant(s)

KAMI ET AL.

Examiner

Marc A Patterson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 3/14/05.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 9-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Specification***

1. The amendment filed March 14, 2005 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: The phrase 'a value of fabric strength at break in a range of from 740 to 1010 N/2.54 cm' does not appear in the original specification. Applicant is required to cancel the new matter in the reply to this Office Action.

## **NEW REJECTIONS**

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 9 – 20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The phrase 'a value of fabric strength at break in a range of from 740 to 1010 N/2.54 cm' does not appear in the original specification.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 10 – 11, 13, 15 and 17 – 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toray Industries (Japanese Patent No. 0790747).

With regard to Claims 10 – 11, 13, 15 and 17 – 21, Toray Industries discloses an air bag (therefore bonded to have a three – dimensional contour; paragraph 0001, line 1, English translation) formed of a woven fabric (the fabric is made by weaving, therefore a plain weave; paragraph 0087, line 1, English translation) containing a copper compound (a copper halide, therefore a copper salt; paragraph 0025, line 4 of English translation) in a mixture with alkali metal (paragraph 0025, line 6 of English translation) having a copper concentration of 150 parts per million (paragraph 0025, line 5 of English translation); each yarn comprises a plurality of filaments (yarns; paragraph 0021, lines 1 – 3 of English translation) having a fineness of 3 denier (paragraph 0029, line 2 of English translation). With regard to Claims 10 – 11, 13, 15 and 17 – 21, Toray Industries fails to disclose a product of fineness of warp or weft multiplies by weave density less than 16000 decitex times end or pick per inch, a load at 15% elongation in the range of 3 to 35N%/inch and tensile work at break of 7000 to 30,000N%/2.54 cm, fineness of weft multiplied by weave density which is larger than the fineness of warp multiplied by weave density, yarns having a fineness from 66 to 167 decitex and a tensile strength of 5.4 cN/dtex or greater and a value of fabric strength at break in a range of from 740 to 1010 N/2.54 cm.

However, Toray Industries discloses a product of square root of fineness of warp of weft multiplied by weave density of 2000 (covering factor; paragraph 0062, lines 1 – 2 of English translation), a tensile strength of 160 kilograms per 3 centimeters (paragraph 0062, lines 2 – 3 of English translation) and yarns having fineness of 500 deniers (paragraph 0021, English translation). Therefore, the product of fineness of warp and weft multiplied by weave density, tensile fabric strength (therefore the tensile work at break and load at 15% elongation and tensile strength of the yarn) and fineness of yarn would be readily determined through routine optimization by one having ordinary skill in the art depending on the desired end use of the product. It therefore would be obvious for one of ordinary skill in the art to vary the product of fineness of warp or weft multiplied by weave density, tensile strength and fineness of yarn, since the product of fineness of warp or weft multiplied by weave density, tensile strength and fineness of yarn would be readily determined through routine optimization by one having ordinary skill in the art depending on the desired end result as shown by Toray Industries in the absence of a showing of unexpected results. *In re Boesch and Slaney*, 205 USPQ 215 (CCPA 1980).

6. Claims 9, 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toray Industries (Japanese Patent No. 0790747) in view of Smith et al (U.S. Patent No. 5,378,019).

Toray Industries discloses an air bag comprising a woven polyamide fabric as discussed above. With regard to Claim 9, Toray Industries fails to disclose an air bag comprising two woven fabrics which are interwoven with each other.

Smith et al teach an air bag comprising two woven fabrics which are interwoven with each other (joined by seam; column 3, lines 56 – 68; column 4, lines 1 – 13) for the purpose of using the air bag on the driver's side of a vehicle (column 3, lines 56 – 57). One of ordinary skill in the art would therefore have recognized the advantage of providing for the interweaving of Smith et al in Toray Industries, which is an air bag comprising fabric, depending on the desired use for driver's side protection of the end product.

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for two woven fabrics which are interwoven with each other in Toray Industries in order to use the air bag on the driver's side of a vehicle as taught by Smith et al.

With regard to Claims 14 and 16, the air bag which is taught by Smith et al comprises a circular shape (therefore circular in plan view; column 3, lines 56 – 66; Figure 1).

7. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Toray Industries (Japanese Patent No. 0790747) in view of Mizuki et al (U.S. Patent No. 5,637,385).

Toray Industries discloses an air bag comprising a woven polyamide fabric as discussed above. Toray Industries fails to disclose an air bag in which the birefringence of the weft is larger than that of the warp.

Mizuki et al teaches an air bag (column 1, lines 11 – 21) comprising a birefringence corresponding to a drawing ratio of 3.0 or more (column 12, lines 4 – 11) for the purpose of obtaining an air bag which is both high – strength and ultra – fine (column 12, lines 41 – 44). One of ordinary skill in the art would therefore have recognized the advantage of providing for

the birefringence of Mizuki et al in Toray industries, which is an air bag, depending on the desired strength of the end product.

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for a birefringence corresponding to a drawing ratio of 3.0 or more in Toray Industries in order to obtain an air bag which is both high – strength and ultra – fine as taught by Mizuki et al.

Mizuki et al fail to disclose a birefringence of the weft which is larger than that of the warp. However, Mizuki et al disclose birefringence corresponding to a drawing ratio of 3.0 or more as discussed above. Therefore, the birefringence of warp and weft would be readily determined through routine optimization by one having ordinary skill in the art depending on the desired end use of the product. It therefore would be obvious for one of ordinary skill in the art to vary the birefringence of warp and weft, since the birefringence of warp and weft would be readily determined through routine optimization by one having ordinary skill in the art depending on the desired end result as shown by Mizuki et al in the absence of a showing of unexpected results. *In re Boesch and Slaney, 205 USPQ 215 (CCPA 1980).*

#### ANSWERS TO APPLICANT'S ARGUMENTS

8. Applicant's arguments regarding the 35 U.S.C. 103(a) as being unpatentable over Toray Industries (Japanese Patent No. 0790747), 35 U.S.C. 103(a) rejection of Claims 9, 14 and 16 as being unpatentable over Toray Industries (Japanese Patent No. 0790747) in view of Smith et al (U.S. Patent No. 5,378,019) and 35 U.S.C. 103(a) rejection of Claim 12 as being unpatentable over Toray Industries (Japanese Patent No. 0790747) in view of Mizuki et al (U.S. Patent No.

5,637,385), of record in the previous Action, have been carefully considered but have not been found to be persuasive for the reasons set forth below.

Applicant argues, on page 7 of the remarks dated March 14, 2005, that Toray suggests it would not be possible to use a yarn having a decitex of 66 to 167, far less than Toray's lower limit of 210 denier, and that Toray's fabric strength at break is significantly greater than the claimed range of 740 to 1010 N/2.54 cm.

However, it is unclear why the value of Toray is limited to 66 to 167 decitex; furthermore, as stated above, the phrase 'a value of fabric strength at break in a range of from 740 to 1010 N/2.54 cm' does not appear in the original specification, although the value appears in Table A, which was submitted during prosecution. The limitation therefore constitutes new matter. However, the new matter is discussed in the new rejection above.

Applicant also argues on page 7 that since Toray lacks consideration for the importance of tensile work at break of fabric, a skilled person in the art could not predict what range of yarn size and what woven structure would make a lighter and thinner air bag yet resistance against dynamic load upon inflation.

However, as stated above, Toray discloses the tensile fabric strength, and therefore the tensile work at break, since the work that is required to break the fabric is dependent on the tensile strength of the fabric.

Applicant also argues, on page 8, that an attempt to provide Toray with the backing layer of Smith et al would be contrary to Toray's teachings.

However, as stated above, Smith et al teach an air bag comprising two woven fabrics which are interwoven with each other (joined by seam; column 3, lines 56 – 68; column 4, lines



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1 – 13) for the purpose of using the air bag on the driver's side of a vehicle (column 3, lines 56 – 57). One of ordinary skill in the art would therefore have recognized the advantage of providing for the interweaving of Smith et al in Toray Industries, which is an air bag comprising fabric, depending on the desired use for driver's side protection of the end product.

Applicant also argues, on page 9, that neither Toray nor Mizuki et al lays the groundwork for the claimed relationship of warp yarn to weft yarn, that the mechanical properties are substantially the same in the warp and weft directions, or lays the groundwork for optimization.

However, it is unclear why optimization is inconsistent with substantially the same mechanical properties in the warp and weft direction, and it is unclear how a birefringence of the weft that is larger than that of the warp is consistent with mechanical properties that are substantially the same in the warp and weft direction. Furthermore, as stated above, Mizuki et al disclose birefringence corresponding to a drawing ratio of 3.0 or more as discussed above. Therefore, the birefringence of warp and weft would be readily determined through routine optimization by one having ordinary skill in the art depending on the desired end use of the product. It therefore would be obvious for one of ordinary skill in the art to vary the birefringence of warp and weft, since the birefringence of warp and weft would be readily determined through routine optimization by one having ordinary skill in the art depending on the desired end result as shown by Mizuki et al in the absence of a showing of unexpected results. *In re Boesch and Slaney*, 205 USPQ 215 (CCPA 1980).

Applicant also argues on page 9 that the basis for the new recitation 'a tensile strength of 5.4 cN/dtex or greater' is found in Table A.

However, as stated above, Table A was not included in the original specification; the limitation is not considered to be new matter, only because it appears to be supported by page 15 and Table 1 of the original specification.

Applicant also argues, on page 9, that there is no reason provide as to why the nylon 66 yarns of U.S. Patent No. 5,533,755 should be of a copper yarn.

However, Nelson et al was not cited in the previous Action, because it is not considered to be relevant prior art.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc A Patterson whose telephone number is 571-272-1497. The examiner can normally be reached on Mon - Fri 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Marc Patterson* 6/27/05  
Marc A. Patterson, PhD.  
Examiner  
Art Unit 1772